



**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2021-0187; Project Identifier AD-2020-01664-E; Amendment 39-21583; AD 2021-11-21]**

**RIN 2120-AA64**

**Airworthiness Directives; CFM International, S.A. Turbofan Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain CFM International, S.A. (CFM) LEAP-1A model turbofan engines. This AD was prompted by a report of a manufacturing quality escape found during an inspection of a high-pressure turbine (HPT) case. This AD requires the removal from service of the affected HPT case. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact CFM International, S.A., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: (877) 432-3272; email: [aviation.fleetsupport@ge.com](mailto:aviation.fleetsupport@ge.com). You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0187.

## **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0187; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Christopher McGuire, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington MA 01803; phone: (781) 238-7120; fax: (781) 238-7199; email: [Chris.McGuire@faa.gov](mailto:Chris.McGuire@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain CFM LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26CJ, LEAP-1A26E1, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A model turbofan engines. The NPRM published in the *Federal Register* on March 23, 2021 (86 FR 15443). The NPRM was prompted by a report of a manufacturing quality escape found during an inspection of an HPT case. In the NPRM, the FAA proposed to require the removal from service of the affected HPT case. The FAA is issuing this AD to address the unsafe condition on these products.

### **Discussion of Final Airworthiness Directive**

#### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

#### **Conclusion**

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed CFM Service Bulletin (SB) LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020. This SB specifies procedures for replacing the affected HPT cases. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

## **Costs of Compliance**

The FAA estimates that this AD affects 8 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

### **Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Remove and replace the HPT case	1 work-hour x \$85 per hour = \$85	\$217,600	\$217,685	\$1,741,480

## **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2021-11-21 CFM International, S.A.:** Amendment 39-21583; Docket No. FAA-2021-0187; Project Identifier AD-2020-01664-E.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to CFM International, S.A. (CFM) LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26CJ, LEAP-1A26E1, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A model turbofan engines, with a high-pressure turbine (HPT) case, part number (P/N) 2668M94G01, that contains a stage 7 port, P/N 2614M30P01, with a port casting serial

number (S/N) listed in Table 1 in Planning Information, Paragraph 3.A., of CFM Service Bulletin (SB) LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

**(e) Unsafe Condition**

This AD was prompted by a report of a manufacturing quality escape found during inspection of an HPT case. The FAA is issuing this AD to prevent failure of the HPT case. The unsafe condition, if not addressed, could result in failure of the HPT case, uncontained rotor release, damage to the engine, and damage to the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Before the HPT case exceeds the cycles since new limit in Table 1, Planning Information, Paragraph 3.A., of CFM SB LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020, or during the next piece part exposure, whichever occurs first after the effective date of this AD, remove the affected HPT case from service and replace with a part eligible for installation.

**(h) Definitions**

For the purpose of this AD:

(1) A part eligible for installation is an HPT case, P/N 2668M94G01, that contains a stage 7 port, P/N 2614M30P01, with an S/N that is not listed in Table 1 in Planning Information, Paragraph 3.A., of CFM SB LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020.

(2) Piece-part exposure is when the HPT case is removed from the engine and fully disassembled.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the

certification office, send it to the attention of the person identified in Related Information.

You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

For more information about this AD, contact Christopher McGuire, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7120; fax: (781) 238-7199; email: Chris.McGuire@faa.gov.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) CFM Service Bulletin LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020.

(ii) [Reserved]

(3) For CFM service information identified in this AD, contact CFM International, S.A., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: (877) 432-3272; email: aviation.fleetsupport@ge.com.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on May 21, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2021-12137 Filed: 6/9/2021 8:45 am; Publication Date: 6/10/2021]